

REMARKS

In response to the Official Action of July 13, 2004, the abstract has been amended in a manner which is believed to be in compliance with the 37 C.F.R. 1.72(b).

Referring now to paragraphs 2 and 3 of the Official Action, it is respectfully submitted that claims 1-28 are not obvious in view of US patent 5,497,504, Acampora et al. (hereinafter Acampora) in view of US patent 6,125,278, Wieczorek et al. (hereinafter Wieczorek), further in view of US patent 6,526,282, Kadoshima et al. (hereinafter Kadoshima). The Examiner, as detailed at paragraph 3 of the Official Action with regard to claim 1, primarily relies upon Acampora for allegedly teaching a method of communicating data in a cellular telecommunication network in which the available capacity is not uniformly distributed. The present invention as recited in claim 1 is indeed directed to a method of communicating data in a cellular telecommunication network in which the available capacity is not uniformly distributed. The steps recited therein include tracking the locations of a mobile station moving in the cellular telecommunication network and scheduling data communication to or from the mobile station in accordance with the available capacity of the network at the current and future locations of the mobile station. Furthermore, the data communication to or from the mobile station at the current location of the mobile station is prioritized in the scheduling step when the available capacity at future locations is less than that of the current location and also that the data communication to or from the mobile station at the current location of the mobile station is delayed in the scheduling step when the available capacity at future locations is higher than that at the current location. What this means is that the method according to the present invention as set forth in claim 1 determines the capacity of communications at the future location based upon tracking the locations of the mobile station in the cellular telecommunication network and from that, determining whether to give the mobile station priority with respect to communication if the future location has less capacity than the current location and *vice versa*; i.e. delaying the scheduling step when the available capacity at future locations is higher than that at the current location.

In contrast in Acampora, a mobile communications network is described having cell-clusters that include a multiplicity of cells. Wireless connections within the network are classified based on the actions taken for the connections when a radio congestion state is encountered. A cell-cluster controller controls admission of new calls to the cell cluster and admits or rejects calls based on various criteria including the number of existing calls of each class in the cell-cluster, traffic considerations including call holding time and a hand-off rate of each class, quality-of-service (QOS) requirements of each class and policy for scheduling or sharing different call classes at each base station of the cell-cluster (see abstract of Acampora and also column 3, lines 24-55 cited by the Examiner). Acampora further states at column 3, lines 56-62:

“...once a new call is admitted to the cell-cluster 45, it can be freely handed off from one base station to another in the cluster without additional intervention from the cell-cluster controller 29, and the likelihood of encountering a radio congestion state is limited to a level defined by the QOS’s guaranteed for each class of wireless connections.”

This statement clearly teaches away from scheduling a data communication dynamically in accordance with the available capacity of the network at the current and future locations of the mobile station when the mobile station moves in the network and already has set up a call; a situation precisely defined in claim 1 of the present invention. Furthermore, the Examiner statement at page 3, lines 8-19 is believed to be at variance with the present invention as claimed in claim 1. Specifically, the Examiner states that column 3, lines 24-55 of Acampora support the proposition that data communication to or from the mobile station at the current location of the mobile station is not scheduled when the available capacity at future locations is less than that at the current location. The Examiner states that this is supported at column 3, lines 24-55 of Acampora wherein the capacity of the whole cell cluster comprises the capacity at the current location or cell of the mobile station and the capacity at the other locations or cells which are the future locations of the mobile station moving within the cells. If for purposes of argument this statement by the Examiner is supported by Acampora, then it precisely teaches away from the present invention. The present invention as set forth in claim 1 specifically requires that the data communication to or from the mobile station at the current location of the mobile station is prioritized in the scheduling step when the available capacity at future locations is less than that at the current location. Furthermore, as set forth in claim 1 of the present invention, the data communication to or from the

mobile station at the current location of the mobile station is delayed in the scheduling step when the available capacity at future locations is higher than that at the current location.

The Examiner at the cited passage of page 3 of the Official Action states that Acampora supports “wherein the data communication to or from the mobile station at the current location of the mobile station is scheduled when available capacity at future locations is higher than that at the current location, again citing Acampora at column 3, lines 24-55. Assuming that Acampora supports this position, this position as cited by the Examiner is precisely opposite that of the present invention (see above). The present invention is explicitly determining if the available capacity of future locations is more or less than that at the current location. If it is less than that at the current location, then the communications at the current location are prioritized and *vice versa*. Nowhere does Acampora disclose or suggest this inventive concept of the present invention.

The Examiner goes on at paragraph 3 of the Official Action to state that Acampora does not teach tracking the locations of mobile stations moving in the cellular telecommunication network and then states that Wieczorek teaches tracking locations of mobile stations moving in the cellular telecommunications network. The Examiner further states that one of ordinary skill in the art would be motivated to combine Acampora with Wieczorek for purposes of tracking mobile stations and then prioritizing communications resources in a manner which would suggest claim 1. For the reasons set forth above, the Examiner’s statements as to what Acampora teaches is indeed at variance to that of the present invention and furthermore, no support for what is cited in the present invention concerning prioritization of communications at the current location of the mobile station in view of the capacity at future locations can be found in Acampora.

In Weiczorek, the communication resources are allocated within a radio communications system in anticipation of expected resource requirements using predictions based on information supplied by a subscriber unit. In one embodiment the system uses the subscriber unit’s location history to predict a future location. In another embodiment, the system uses radio capability information, along with environment information for the subscriber unit, to predict loading conditions for potential hand-over sites and assigns the subscriber unit to one of the potential hand-over sites based on the predicted loading conditions. Weiczorek uses a location history to predict future locations and attempts to predict loading conditions for potential hand-over sites and assigns

the subscriber unit to one of the potential hand-over sites based on predicted loading conditions. Such information concerning the tracking of mobile stations does not make up for the deficiencies in Acampora with regard to a method of communicating data in a cellular telecommunications network wherein the scheduling of the data communication to or from the mobile station in accordance with the available capacity of the network at the current and future locations performs a prioritization or delay of the scheduling step depending upon the capacity at the future locations as compared to the current location in a manner as detailed in claim 1.

Furthermore, the Examiner admits that Acampora in combination with Weiczorek does not teach prioritizing and delaying the mobile station as set forth in claim 1. The Examiner cites Kadoshima for alleged teaching of prioritizing and delaying the mobile station wherein the mobile station with the highest priority will be allowed to place a call first when the network is congested and the mobile stations with the lower priorities will be allowed to place a call later than or after the highest priority mobile station. This form of congestion control is for placing a call; not for determining the scheduling step with regard to available capacity for a data communication already having a mobile station within the cellular telecommunication network.

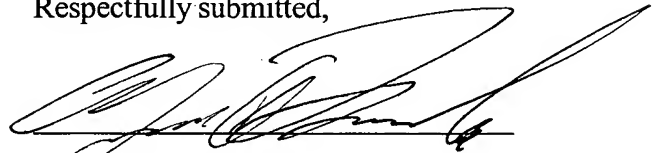
In short, the combination of Acampora, Weiczorek and Kadoshima does not disclose or suggest comparing available capacity at the current and future locations of the mobile station and scheduling a data communication on the basis of the results of that comparison. For all of the foregoing reasons, it is therefore respectfully submitted that claim 1 is distinguished over Acampora in combination with Weiczorek in combination with Kadoshima. Consequently, the dependent claims thereto (claims 2-14), which add further limitations to the method of claim 1, are also clearly distinguished over these references.

Claim 15 of the present invention is directed to a telecommunication system for communicating data in a cellular telecommunication network in which the available capacity is not uniformly distributed. This claim includes a control means communicating with the mobile station and a cellular telecommunication network for tracking of locations of the mobile station moving in the cellular telecommunication network and for scheduling the data communication to or from the mobile station in accordance with the available capacity of the network at the current and future locations of the mobile station. Claim 15 further recites that the data communication to or from the

mobile station at the current location of the mobile station is prioritized by the control means when the available capacity at future locations is less than that at the current location and that the data communications to or from the mobile station at the current location of the mobile station is delayed by the control means when the available capacity at future locations is higher than that at the current location. Thus, claim 15 is an apparatus claim directed to a telecommunication system which is analogous to method claim 1. Therefore, it is respectfully submitted that claim 15 is also neither disclosed nor suggested by Acampora in combination with Weiczorek further in combination with Kadoshima. In view of the fact that claim 15 is believed to be distinguished over the cited art, the dependent claims thereto (claims 16-28) which add further limitations to the telecommunication system recited in claim 15 are also clearly distinguished over these references.

In view of the foregoing, it is respectfully submitted that the present application as amended is in condition for allowance and such action is earnestly solicited.

Respectfully submitted,



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Dated: October 13, 2004

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